AutoCAD Electrical

Software Instructions

Software used			AutoCAD Electrical
Version #			1
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Reviewed by	James T	Date	29/01/21

Software Instructions: AutoCAD Electrical

Acknowledgments

We would like to acknowledge the following references used to compile these instructions for students:

1. https://www.youtube.com/watch?v=Fa5gYiapD1E
2. https://www.youtube.com/watch?v=Q3Yv2oD6bNw

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Software Instructions for AutoCAD Electrical

1. Intro:

Starting your project

When you open your new project, you will be presented with the following screen.

Depending on the page format you select, you will be presented with a document something like this.

Under the project tab, you can open the manager menu to access information about the project.

Select New Project to assign a project to your document.
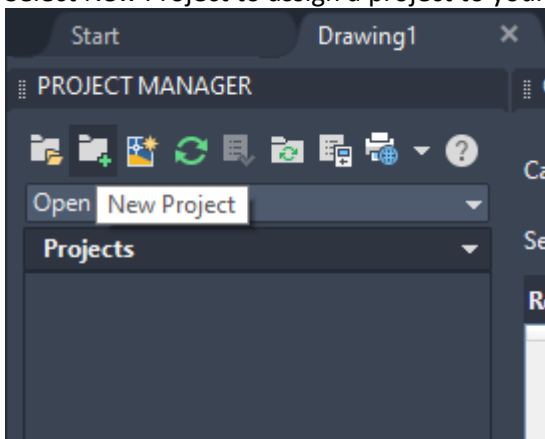
Fill in the detrails for your project and click OK – Properties to access more detailed information regarding the different packages and libraries.
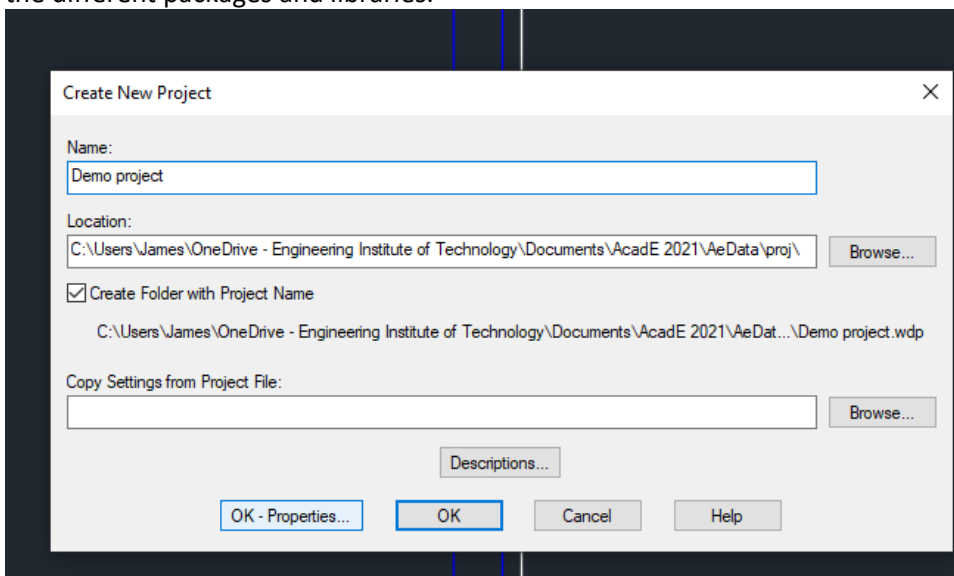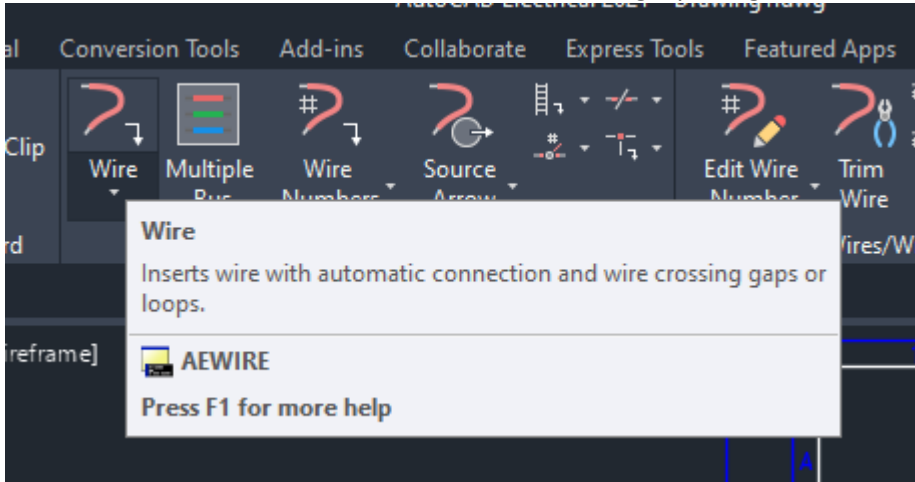
2. Wiring:

Options:

In the bottom of the screen you can access the grid snapping options. As a generasl rule, when placing wires and components, you want to have the grid snap active, and to select labels and components you have placed, turn snapping off.
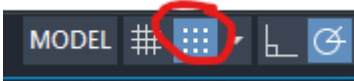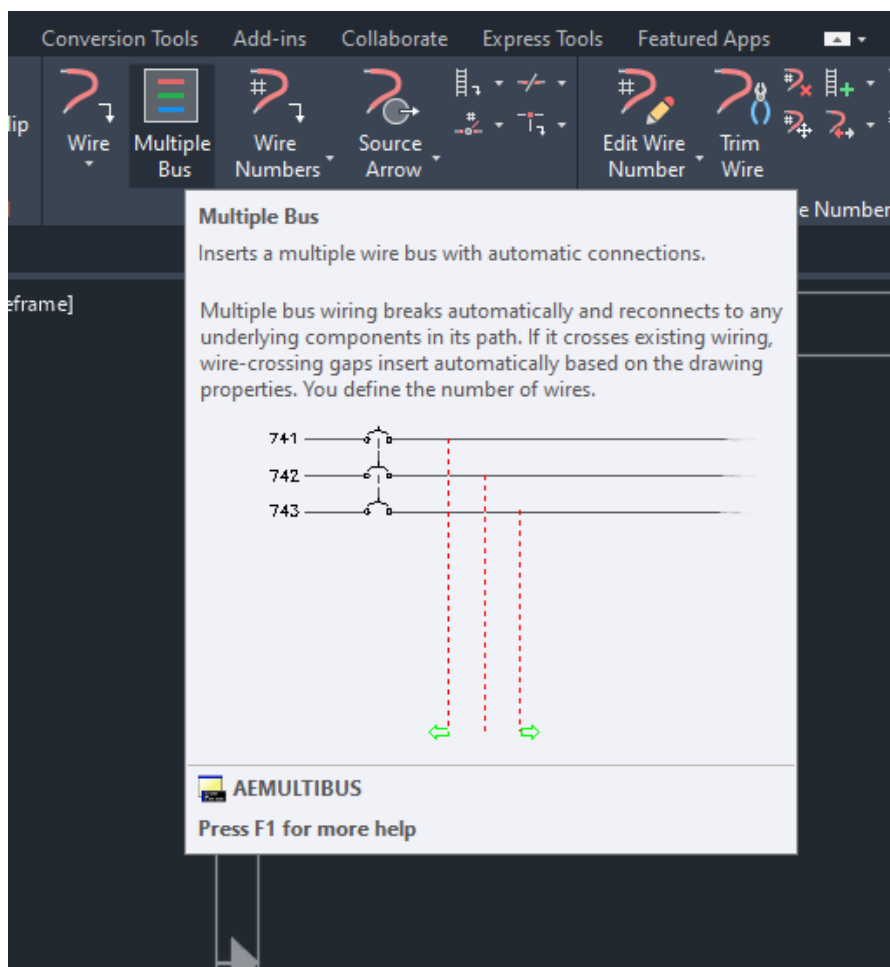

Under the Schematic tab, select the wire menu to begin placing wires.

You can place these wires, clicking the start and end points of each wire.
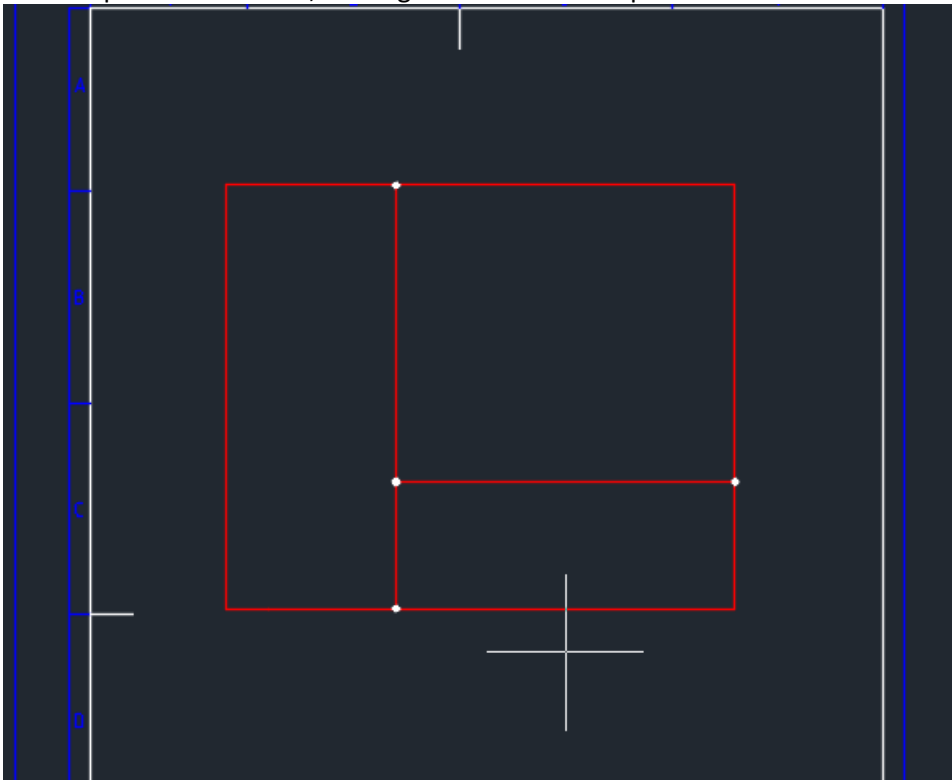
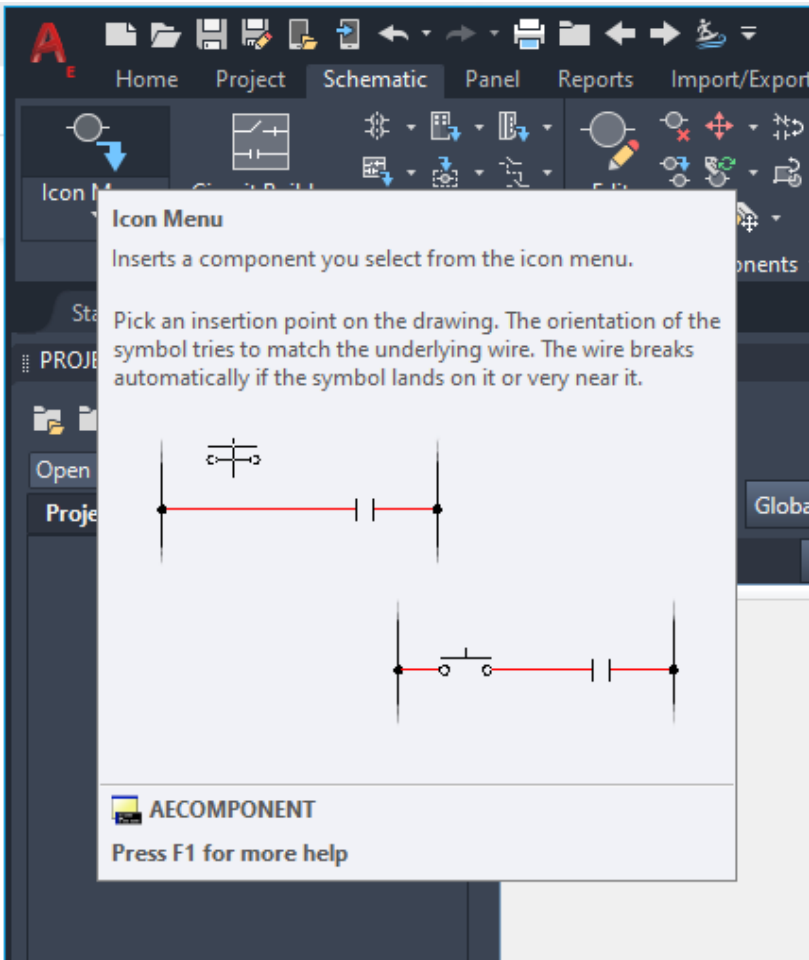You can also place wires in a bus. Select the Multiple Bus menu.

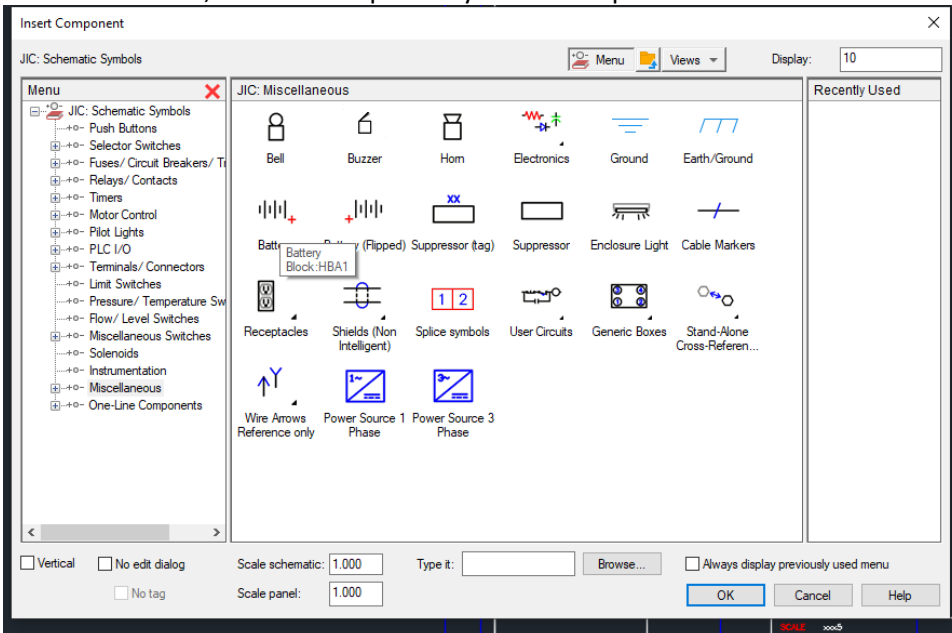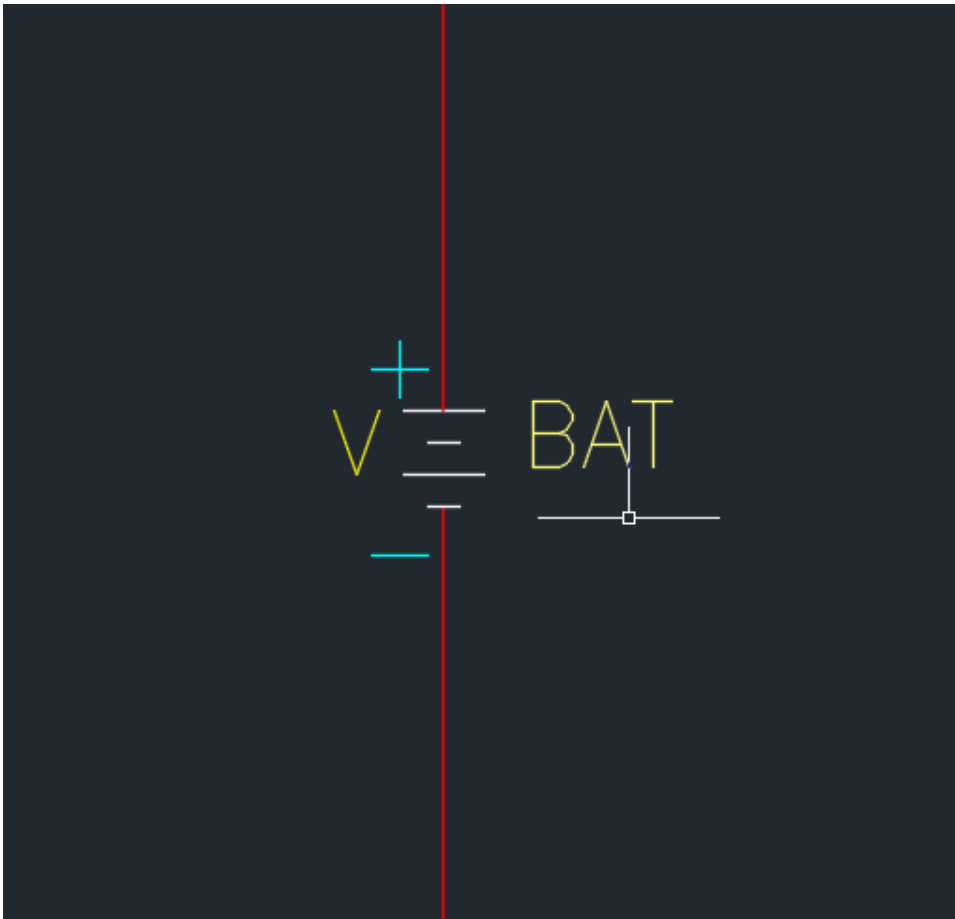This places the wires in a line of parallel lengths.

Components:
To begin placing electrical components, open the Icon Menu.

In the icon menu, find the component you want to place.

Select a location on the wire and click it to place the component.
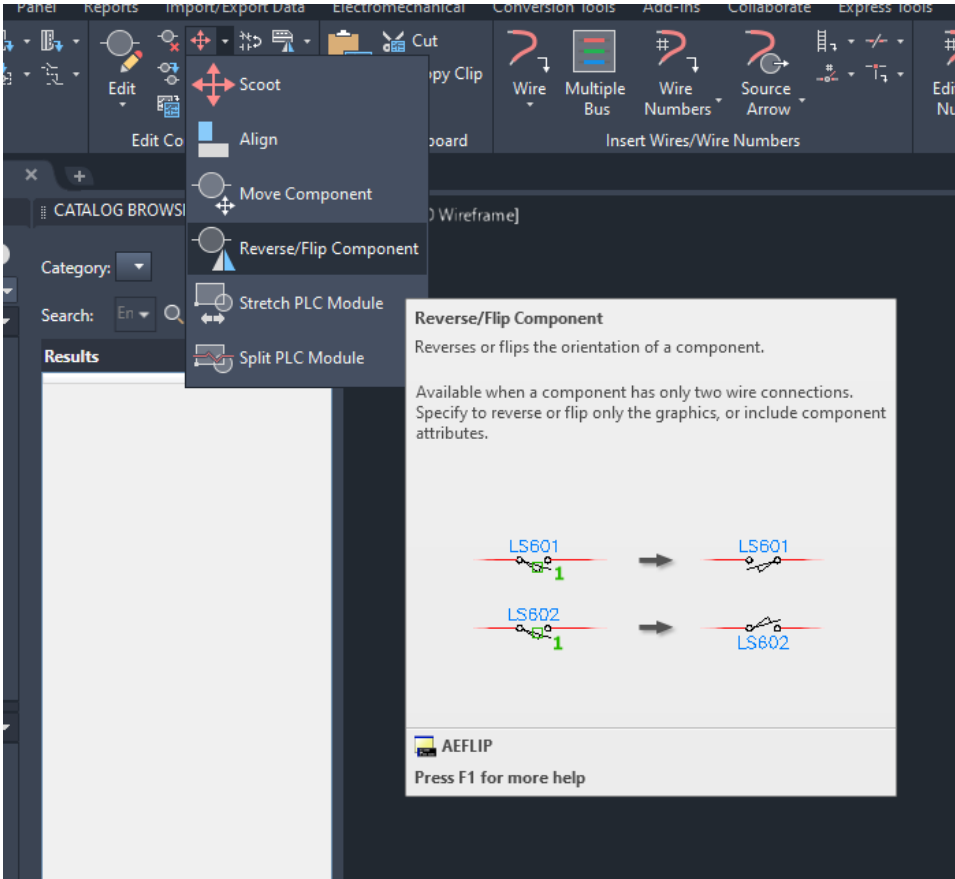
EIT
Engineering Institute of Technology.

When you place the component, this menu will pop up. Fill in the different text boxes to add labels to the placed components. Click OK-repeat to place another copy of the component.
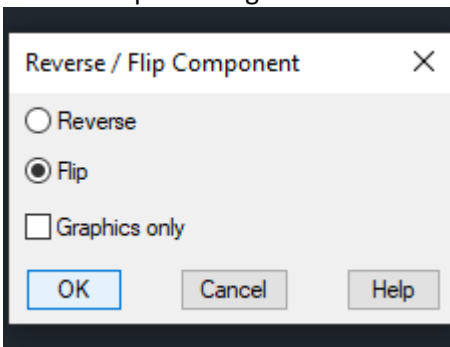

Under the Edit Components section of the tool bar, select Reverse/Flip Component to change the orientation of your components.
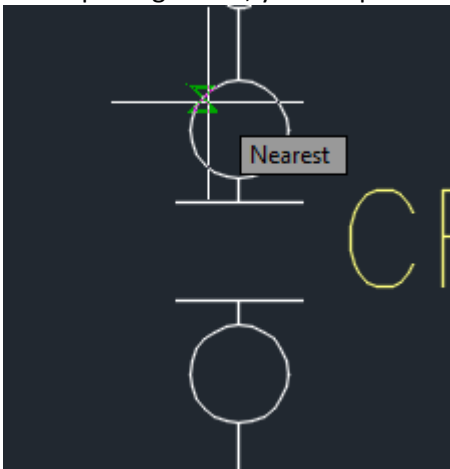
This is the menu that will pop up. Select reverse to change the orientation of the component along the wire, or select flip to change the orientation of the component perpindicular to the wire.
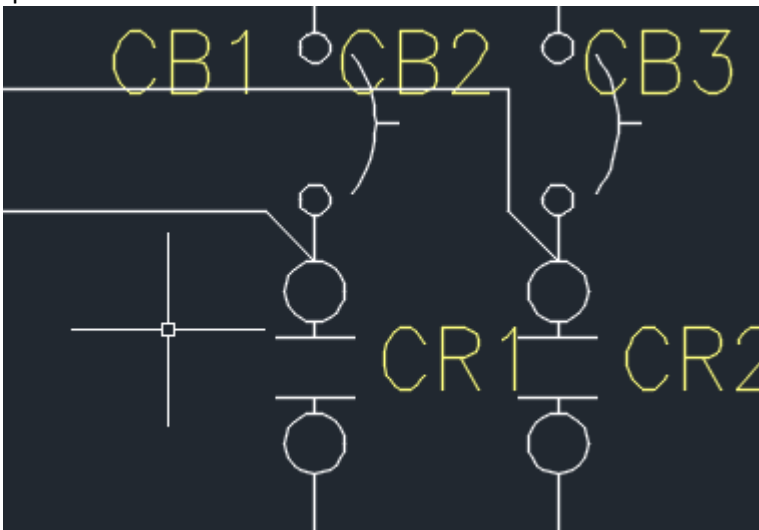

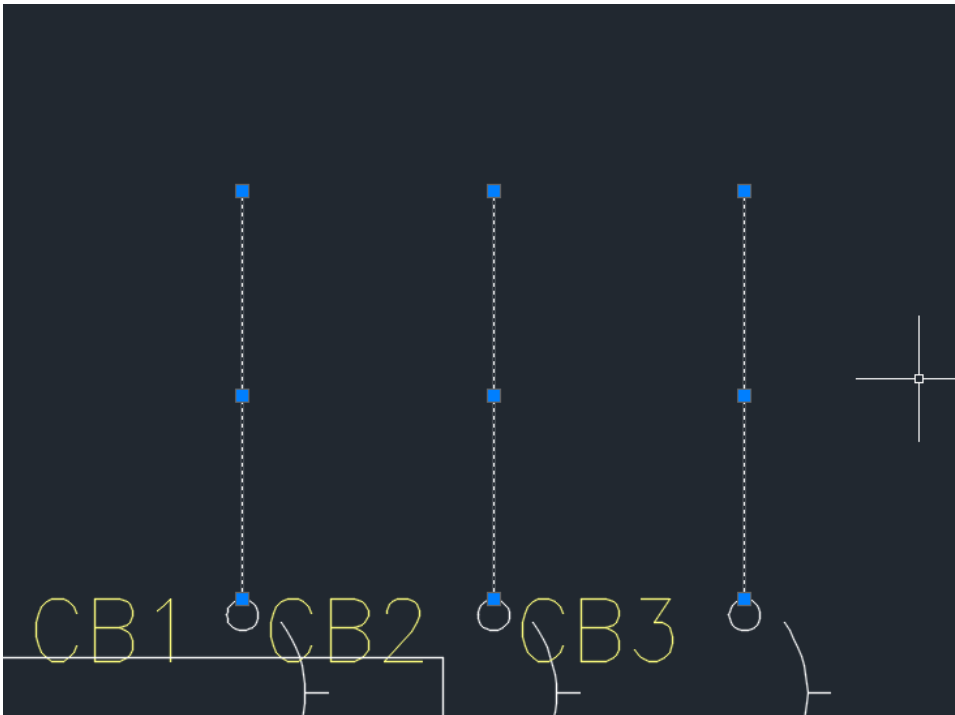# Here is what one component flipped will look like.

When placing a wire, you can place them off of the nodes of your components.
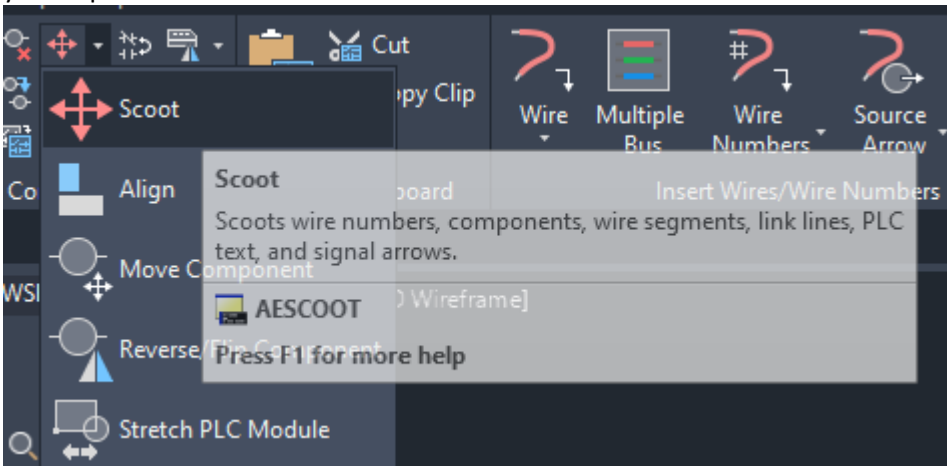

You can see how these wires come off of the component at an angle. This section of the circuit is getting quite crowded.
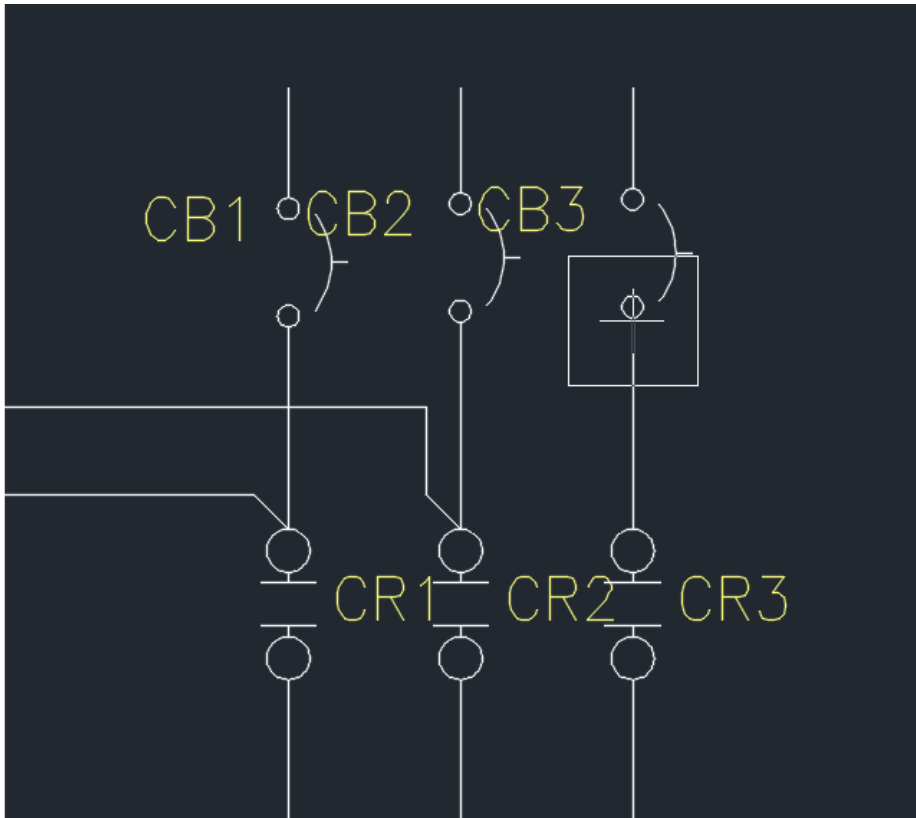

You can select the wires and click and drag them to stretch the ends of the wires.

In the Edit Components menu you can select the scoot tool which will allow you to move the components you've placed.

You can click on the components you want to move and adjust their position.
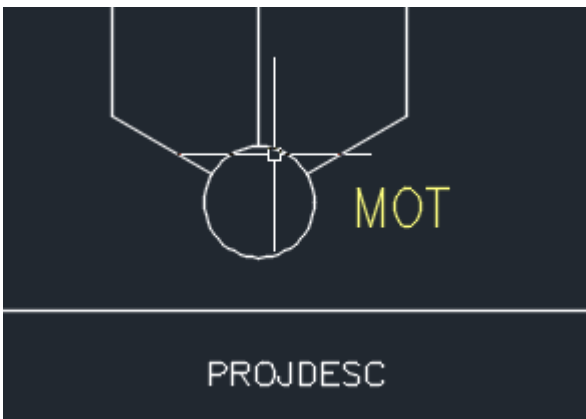
Some components have more complicated pin connections. The 3-phase motor is one of these. On the 3 wire bus you can place the motor in the center.
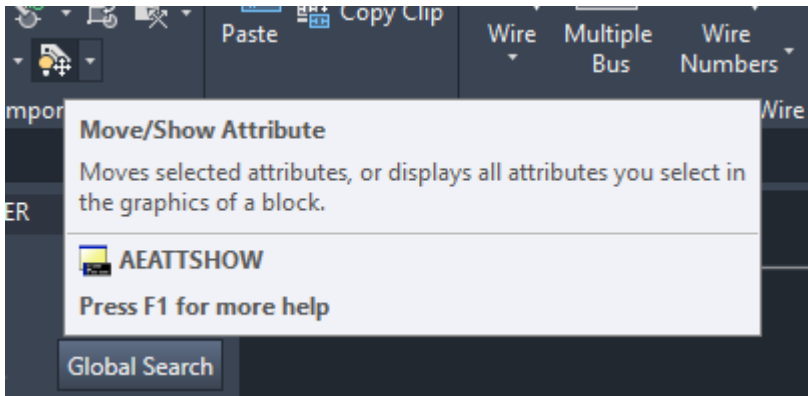

The motor will connect itself like so.

3. Labeling and Documentation:

Under the Edit Components section of the tool bar, select Move/Show Attribute to be able to move labels around.

Holding shift, select the labels you want to move. Once these areselected, press the space bar to set your base point. Click the basepoint for your moving and move the labels wher eyou want them.
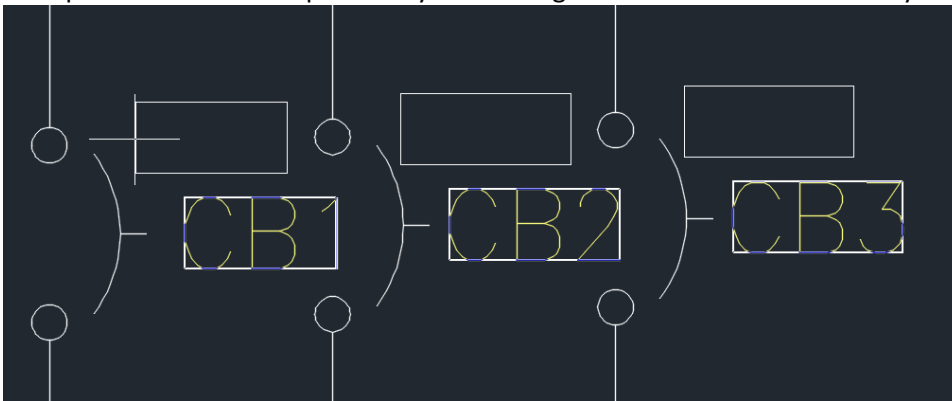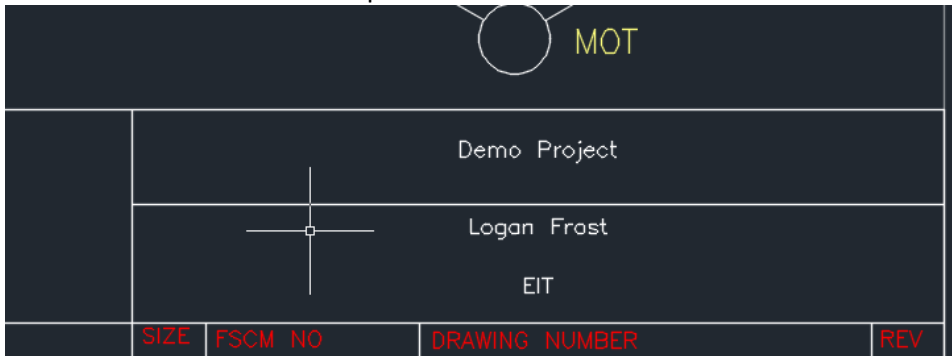

You can double click the sheet label in the corner of the page to adjust its contents.
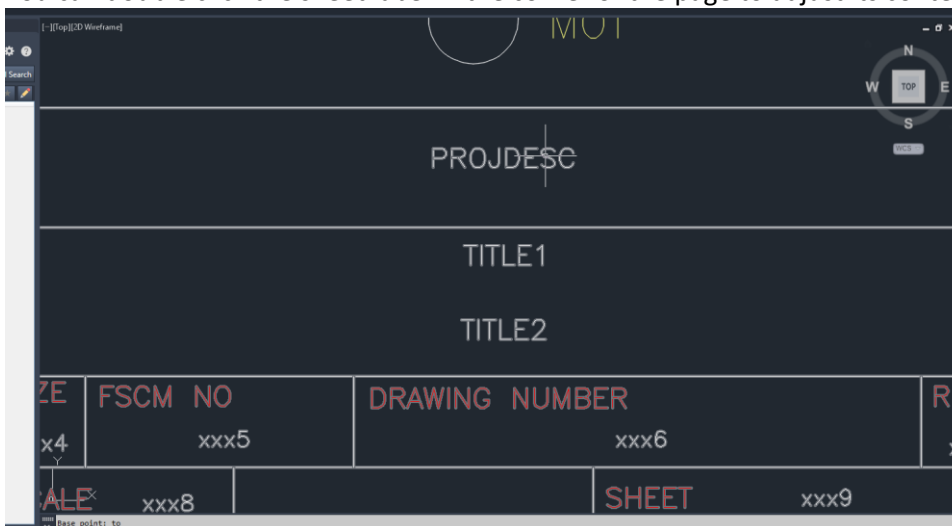
This is the menu which will pop up. Select the tag you want to edit and adjust the value. Your changes will be represented in the label of the sheet.
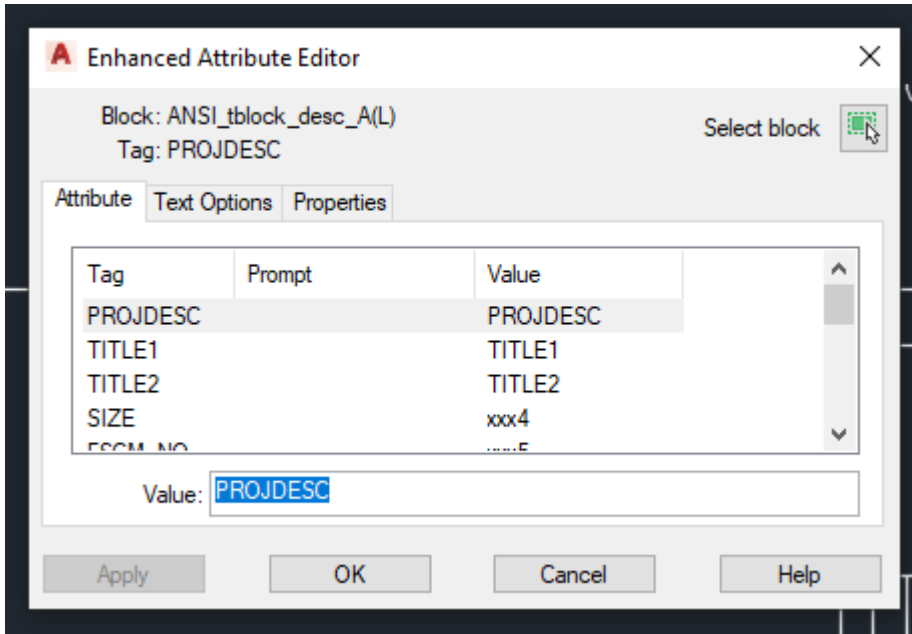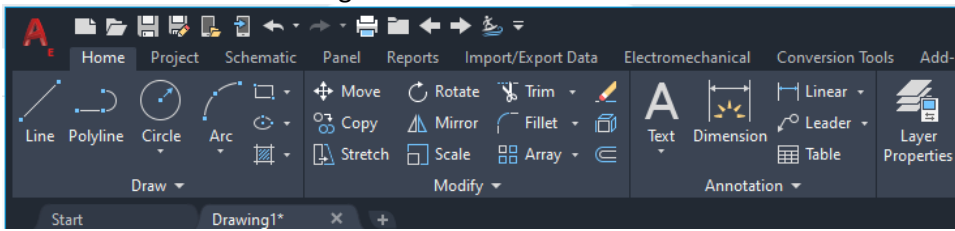
Here is what the results will represent.

4. Drawings:

As the software is a part of AutoCAD, you can also produce drawings. We will demonstrate this via the creation of a small dial. Navigate to the Home tab of the toolbar.


Using the circle tool, you can create this basic dial form. Use the object snapping options mentioned earlier to snap to the circle's center and produce the concentric circles.
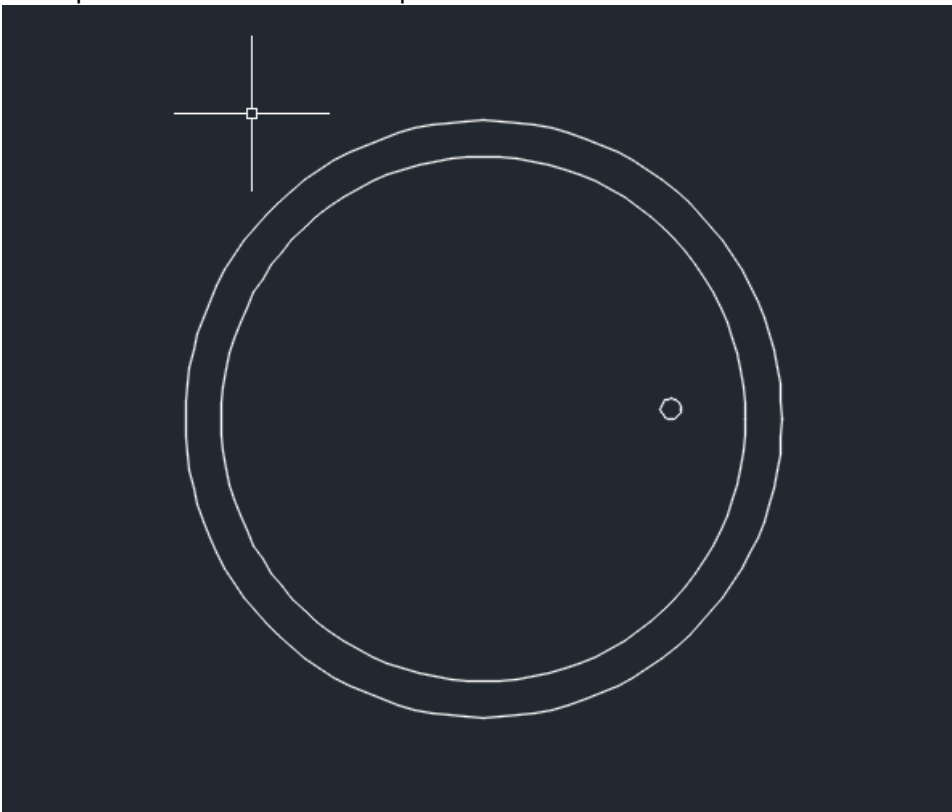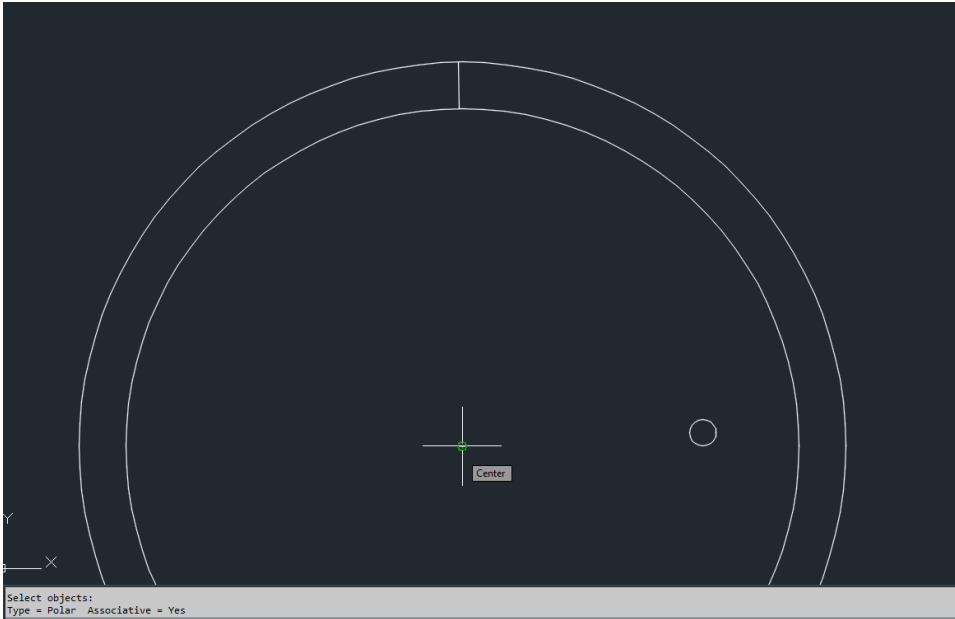

Changing the object snapping options to allow for the "nearest" option. Using the line tool, draw a line between the two circles to create a tic mark.
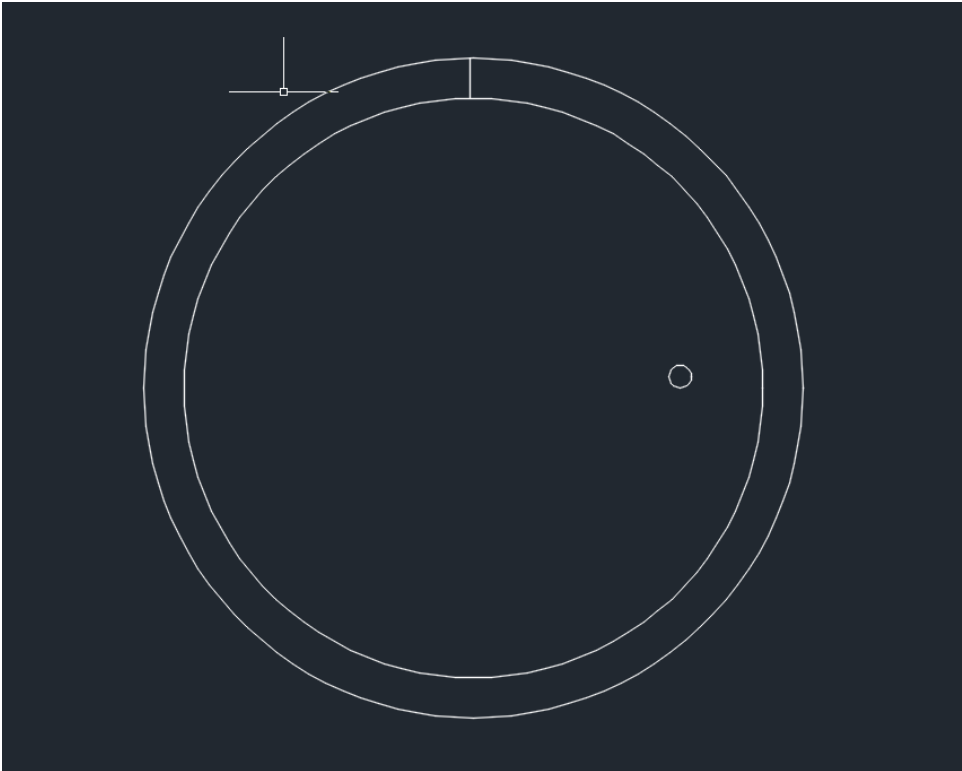
Open the array tool and click the polar option. select the tic mark created earlier and press enter.
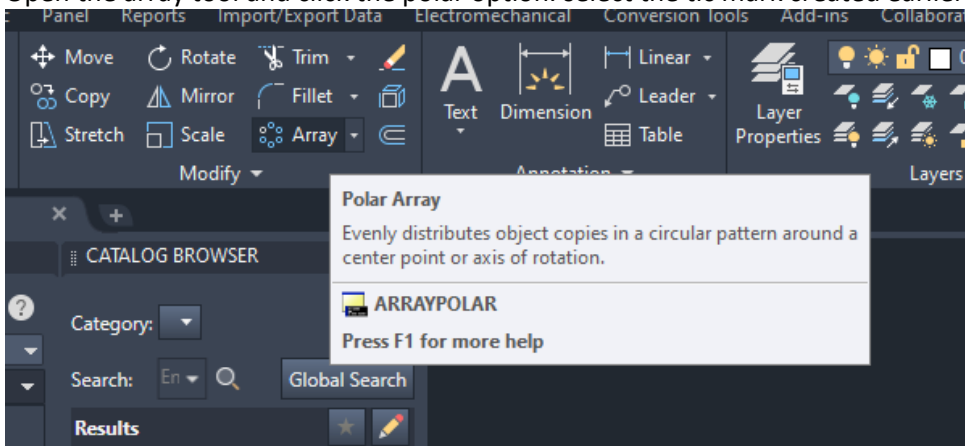
You will then be prompted to select the center of the circle.

Type the number of instances under the leftmost items section.